Mass ratio

comparison of the molar mass of one element in a compound to the molar mass of another element in the same compound

e.g. NaCl

mass ratio of sodium to chlorine?

$$\frac{Na}{Cl} = \frac{22.990\ g/mol}{35.453\ g/mol} = 0.648$$

always

$0.648_g Na : 1_g Cl$ in NaCl

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mass ratio of hydrogen to oxygen in water? H_2O

$$\frac{H_2}{O} = \frac{2(1.0079\ g/mol)}{15.999\ g/mol} = 0.126$$

$0.126_g H : 1_g O$ in H_2O

$$\frac{Ag}{Cl} = \frac{107.9}{35.453} \quad \ldots$$

Percent Composition

compare the molarmass of one element to the molar mass of the entire compound & multiply by 100%

e.g. NaCl

$$\frac{Na}{NaCl} \times 100\% = \frac{22.990\ g/mol}{58.443\ g/mol} \times 100\%$$

$$= 39.337\% \text{ Na}$$

$$\longrightarrow 60.663\% \text{ Cl}$$